Remarks

Claims 1-3, 6-11, 13, 14, 25, 28-36, and 60-71 are pending in this application. Claims 1-3, 6-11, 13-14, 25, 28-36, and 60-71 stand rejected.

Claim Objections

Claim 63 is objected to under 37 C.F.R. § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claim 63 is cancelled. Claim 60 is amended to incorporate additional ligands from claim 63. Accordingly, the objection under 37 C.F.R. § 1.75 is now moot.

Claims 1, 25, and 60 are objected to because of the following informalities: the claims contain the redundant phrase "selected from the group consisting of selected from the group consisting of."

Claims 1, 25, and 60 are amended to remove the redundant language. Accordingly, the objection to these claims is now moot.

Claims 2, 3, 14, 36, 61, 64, and 71 are objected to because of the following informalities: the claims should be formatted with proper Markush language, i.e., "selected from the group consisting of."

The Markush language is amended as suggested by the Examiner. Accordingly, the objection with respect to claims claims 2, 3, 14, 36, 61, 64, and 71 is now moot.

Claim Rejections - 35 U.S.C. § 103

Claims 1-3, 6-10, 13-14, and 60-69 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the journal article by Wang et al. in view of Fan et al. "Preparation of Cu-AI203 nano-composite powders by electroless copper plating."

Applicants respectfully traverse the present rejection for the following reasons. Independent clams 1 and 60 require "one or more heteroatom donor ligands bonded to the surface of the nanoparticles, the donor ligands." The claims provide specific examples of the ligands. The June 2, 2009 Office Action (the Office Action) admits the deficiency of Wang et al. with respect to this element. This apparent deficiency is addressed by reliance on Fan et. al.:

> Wang does not teach the heteroatom donor ligands required by the claims. However, it would have been obvious to one of ordinary skill in the art to modify Wang with Fan because Fan teaches using 2,2-bypridyl (2,2'-bipyridine) to stabilized nanosized powders. See abstract of Fan. After calcination (see Experimental section of Wang), one of ordinary skill in the art would have been motivated to use the stabilizer (dispersing agent) of Fan in order to produce a stable dispersion of the nanoparticles of Wang in order to dispose the nanoparticles on a substrate or perform other uses requiring a stable dispersion. In general, selection of a particular dispersing agent among known dispersing agents (known to stabilize nanoparticle dispersion) is a matter of design choice and routine optimization in the absence of unexpected results.

The Office Action has not properly interpreted the teachings of Fan. Fan does not teach that 2,2-bypridyl (2,2'-bipyridine) is used to stabilize nanosized powder as stated in the Office Action. Instead, Fan teaches a process in which 2,2-bypridyl (2,2'-bipyridine) is a component of a bath composition for the electroless plating of nano $A1_20_3$. Fan states that 2,2-bipyridyl act as a stabilizer so that "Cu_20 can be reduced effectively" in the electroless plating. The Cu_2O are not the nanoparticles in Fan, it is Al_2O_3 which are the nanoparticles. Fan does not mention or suggest that 2,2-bypridyl (2,2'-bipyridine) interacts with the Al_2O_3. Moreover, the interaction in Fan is

most likely on a molecular level with a molecule of 2,2-bypridyl (2,2'-bipyridine) interacting with a molecule of Cu_2O.

Accordingly, for at least these reasons, claims 1-3, 6-10, 13-14, and 60-69 are patentable under 35 U.S.C. § 103(a)over Wang et al. in view of Fan et al.

Claims 25, 28-36, and 60-71 are rejected under 35 U.S.C. § 103(a)as being unpatentable over the journal article by Aslam et al. in view of Fan et al. "Preparation of Cu-AI203 nano-composite powders by electroless copper plating."

The Office Action states that Aslam does not disclose the heteroatom donor ligands of independent claims 25 and 60. Fan et al. is relied upon to remedy this deficiency. The misinterpretations of the teachings of Fan et al. are set forth above. According, for the same reasons as set forth above, claims 25, 28-36, and 60-71 are allowable under 35 U.S.C. § 103(a) over Aslam et al. in view of Fan et al.

Claims 1-3, 6-11, 13-14, 25, 28-36, and 60-71 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the journal article by Dong et al. in view of Fan et al.

The Office Action states that Dong et al. does not disclose the heteroatom donor ligands of independent claims 1, 25 and 60. Fan et al. is relied upon to remedy this deficiency. The misinterpretations of the teachings of Fan et al. are set forth above. According, for the same reasons as set forth above, claims 1-3, 6-11, 13-14, 25, 28-36, and 60-71 are allowable under 35 U.S.C. § 103(a) over Dong et al. in view of Fan et al.

Conclusion

Applicants have made a genuine effort to respond to each of the Examiner's objections and rejections in advancing the prosecution of this case. Applicants believe that all formal and substantive requirements for patentability have been met and that this case is in

condition for allowance, which action is respectfully requested. If any additional issues need to be resolved, the Examiner is invited to contact the undersigned at his earliest convenience.

The Petition fee of $245.00 is being charged to Deposit Account No. 02-3978 via electronic authorization submitted concurrently herewith. The Commissioner is hereby authorized to charge any additional fees or credit any overpayments as a result of the filing of this paper to Deposit Account No. 02-3978.

Respectfully submitted,

CHARLES H. WINTER ET AL.

By /James W. Proscia/
James W. Proscia
Reg. No. 47,010
Attorney/Agent for Applicant

Date: November 2, 2009

BROOKS KUSHMAN P.C.
1000 Town Center, 22nd Floor
Southfield, MI 48075-1238
Phone: 248-358-4400
Fax: 248-358-3351